

LOW-PRICED STEAM CAR IS ON MARKET

Indiana Inventor Will Put Out Model Under \$1000.

NEW FEATURES INTEREST

Car Driven by Direct Application of Power to Rear Wheels Gives Excellent Results.

INDIANAPOLIS, Ind., March 12.—Rumors, current at the New York and Chicago auto shows that an important enterprise in steam motors is soon to be launched, have been definitely confirmed by George A. Coats of this city, capitalist and representative of large steam interests. Mr. Coats announces that he will manufacture and market a five-passenger six-cylinder steam touring car of 110-inch wheelbase, with electric lighting and starting, to retail at about \$1000.

The Coats construction embodies several distinct advances which have interested leading steam engineers. For many months the Coats experimental shop has been the rendezvous of pilgrimages by steam specialists from all parts of the country. Engineers and other representatives of the gasoline car industry are also joining the visitors in increasing numbers. Every week sees deputations from distant points at the headquarters in Indianapolis.

Models Carefully Constructed.
The operating models have been taken down and put together many times. Not a feature has escaped critical examination. The judgment of many has been that the Coats car—the direct application of the steam to the wheels, absolutely eliminating the geared differential. The rear axle is the engine—the engine is the rear axle—whichever way you choose to consider it.

Engine Part of Axle.
It is engine, axle and differential function, all in one. The engine is in housing being just about the size of the ordinary rear axle gear case. The housing of each half of the axle carries three fixed cylinders, set at 120 degrees apart or one-third the circle. These cylinders are exactly like those of the automobile engine—with poppet valves, pistons and connecting rods. The bore is 2 1/2 inches, stroke three inches. The three connecting rods in each half are pivoted to crank pins, which are on the drive shaft of each wheel. At a speed of 40 miles an hour, the engine is running at the very low speed of 1000 revolutions per minute. It will be observed that an overlapping stroke is obtained. Before one cylinder is entirely off pressure another has begun to fire and the third is completing its exhaust.

With the Coats steam and water cycle, one filling of the water tank runs the car from 100 to 250 miles while 20 to 40 miles have been obtained on a gallon of kerosene. The exhaust steam is taken by return pipe to the condenser, which is located in front of the boiler in the position of the ordinary radiator. Initial cooling for starting is electrical—controlled by switch on the cow body.

Great Speed Attained.
The characteristics of steam are too well known to require analysis in terms of comparative rating when applied to a motor car. Its range in this is not "three speeds or four speeds," but any speed from drifting to 60 miles an hour; and its whole range is controlled by one small lever on the steering wheel. There is not one gear in the power line of the Coats car. The power is never separated from the load to go from one speed to another. The acceleration, or slowing down, is immediate.

The Coats car, completely equipped, according to the manufacturers, weighs less than 1800 pounds. It has less than 40 moving parts. It eliminates carburetor, timing gears, magnets, clutch, gearshift, flywheel, accelerator, propeller shaft, universal joints and differential. In appearance the Coats car is attractive, but not at all radical in design.

Although it is comparatively young, Mr. Coats has been identified with the automobile industry from the beginning as a field man and distributor of touring cars. Made a trip to New York and Chicago last year, he acquired coal mines in Indiana, which in large part have furnished the capital for his steam car manufacturing.

The origin of the present enterprise is interesting. At the beginning of the war the Portland branch of the Norwegian government sent an engineer to America to study the development of internal combustion engines. He had completed his report and was preparing to return home when Mr. Coats met him. The modest inventor laid before Mr. Coats plans for steam on which he had been working for years. These plans so interested the Indianapolis man that he promptly employed the engineer and established him in an experimental shop with a free hand.

The American automobile man's 20 years of experience and the Norwegian engineer's scientific acumen combined—with the counsel of many experienced American steam and automotive engineers—and the Coats car was the result.

LANE COUNTY PLANNING WORK
Crushed Rock to Be Supplied to Districts in Western Section.

EUGENE, Or., March 12.—(Special.)—The Lane county court may ship crushed rock by rail to Nott, 23 miles west of Eugene and store it in tanks there for distribution to the different road districts in the section of the county that have road programs for this summer. M. H. Hazlow, county commissioner, made a trip to Nott this week to investigate the feasibility of such a move.

Figures on the cost of crushed rock from the crushers in Eugene and shipping it to Nott will be obtained from the railway company and figures will also be obtained on the cost of setting up one of the county rock crushers at or near Nott and getting out the road material there.

Use second gear on hills.

AUTO INDUSTRY, IN ITS DEMANDS FOR GREATER SPACE, INVADERS EVEN PORTLAND'S WATER FRONT.



TIRE MEN PICK STOCKS

SUCCESSFUL DEALER LIMITS LINES FOR HIS TRADE.

Economy Becomes Watchword With Result That Motorist Gets Benefit of Service.

"The progress in business methods made by the great majority of tire dealers in the past few years has been a source of a great deal of satisfaction to the tire manufacturer and especially this year, which has all the indications of being one of the best years that the tire industry has experienced," says N. E. West, general sales manager of the Sanson Tire & Rubber corporation of Los Angeles.

"Economy has become the watchword of the tire dealer. It was impressed upon my mind very forcibly during a recent trip through the territory by noting the tendency of the energetic tire dealer to concentrate his efforts on one or two makes of tires. It has not been very long since the tire dealer felt that to be successful it was necessary for him to stock almost all makes of tires so that he would be in a position to give to the motorist the tire he asked for. The dealer of that day did not practice salesmanship, but followed the line of least resistance and filled the orders of his customers. Today the energetic tire dealer is picking out one or two of the quality tires and concentrating his effort. Success in following this procedure has been remarkable, not only from the standpoint of raising his business in the eyes of the ultimate consumer, the motorist.

"When the motorist goes into a dealer's store and finds that he becomes confused and invariably loses confidence in that dealer, whereas if the dealer is carrying one or two high-class tires and concentrates his sales talk on those particular lines, the motorist is impressed with the apparent sincerity of that dealer.

"It is certainly false economy for a dealer to have a variety of makes of tires, for he has his money tied up in duplicate stock and is wasting both money and space in his establishment. "Today we find the tire dealer selecting the line that he thinks will give the best results, concentrating his effort and using salesmanship with much better results."

NEW CADILLAC FACTORY OPENS
Plant at Detroit Said to Be Last Word in Construction.

DETROIT, March 12.—Beginning March 1, approximately 100 additional employees were added to the new Michigan-avenue plant of the Cadillac Motor Car company. Greatly increased production schedule for March is the cause of the new plant. The plant was closed during January, but was reopened in February, but was not ready for production until March. "Production schedules for March are so far ahead of February that probably we will be able to operate some of our departments on full time in addition to taking on an increased force," an officer of the Cadillac company said.

Engineers pronounce the new plant of the Cadillac company the last word in factory construction. Nothing has been left undone to make conditions for the workers as near ideal as possible.

New Transmission System.
Two inventors of Sistersville, W. Va., have perfected a transmission system for motors which is said to be especially well adapted for automobiles. It is claimed the new invention will enable the gearing automatically to pick up a load on the drive shaft and in the process prevent slipping of the gearing by virtue of the wedge action set up.

ADDING MACHINE MAN NOW SELLING MAXWELL AND CHALMERS AUTOS.

A. H. Workman, formerly sales manager for the Portland branch of the Wales Adding Machine company, has retired from that position to enter the automobile selling field. Mr. Workman has joined the sales force of the C. L. Boss Automobile company, to sell Chalmers, Essex and Maxwell cars and already has shown that he is right at home in that line of salesmanship. He was with the Wales company here for five years, is a member of the City club and a former member of the Rotary club and has a wide acquaintance in Portland business circles.

Pacific Coast Favorite Will Try Again to Land Indianapolis Sweepstakes in May.

INDIANAPOLIS, Ind., March 12.—Roscoe Sables, who is always a contender in speed events, especially on the Pacific coast, will take another whirl on the wheel of fortune in his native state by virtue of his entry in the ninth international 500-mile sweepstakes race to be held at the Indianapolis motor speedway, Monday, May 30.

It was only a few years ago, as a mere youth, that Sables was promoting and piloting cars in race meets over the half-mile tracks at county fair-grounds in Indiana. He was confident he would graduate to the big league of racing and within a short time was riding with several of the better drivers as mechanician. Then he got a car of his own and went right out and made good. Probably no other driver has taken so many spills as Sables and come out of the melee smiling and unharmed.

Sables hails from Lafayette, Ind., just a hop-step-and-jump from the Indianapolis motor speedway, and the home folk flock in droves to see their native son flit with fame and fortune over the bricks of the historic speed course of the booster capital. But something always happens and many believe he is fated in his home state—but he always gives the natives a run for their money while he is in the race.

Two years ago Barney Oldfield thought so well of Sables that he nominated him to pilot his "Golden Submarine," but before the race was well under way a broken cam shaft put the car and Sables out of the running. In the event last May Sables drove three of Louis Chevrolet's creations.



UNUSUAL QUARTERS OCCUPIED BY AMERICAN WAREHOUSE & SALES COMPANY ON SUPPLIES DOCK.

When H. E. Johnson and associates began looking around last December for quarters large enough to handle their automobile sale business they looked long and hard in the effort to find available space with sufficient storage facilities. Finally Supple's dock, at the foot of Belmont street, on the east side of the river, was secured as the only available location large enough to care for the cars to be handled by the concern. Thus it was that a Portland automobile firm invaded the water front district and is now located within hailing distance of the vessels that go up and down the river. The dock affords about 25,000 feet of storage for the use of the company and was formerly occupied by the emergency fleet corporation as an outfitting yard. The company handles both new and used cars of a large number of makes.

MOTORCYCLE MEN HERE

HARLEY-DAVIDSON OFFICIALS VISIT PORTLAND.

Survey of Trade Conditions Being Made With View to Expanding Export Business.

Arthur Davidson, secretary and sales manager, and his brother, William Davidson, vice-president in charge of construction, of the Harley-Davidson Motor company, Milwaukee, Wis., makers of Harley-Davidson motorcycles, were visitors in Portland last week, being on a tour of the Pacific coast studying business conditions.

Arthur Davidson has recently returned from Europe and is now making a study of trade conditions, largely with a view to expanding the foreign trade of the company. The interest is becoming one of the important fields for American goods, destined for these markets generally pass through Portland or other Pacific coast ports. After a brief visit here the two men went on to the sound for a short stay and expect to return to Portland for a longer visit during the coming week.

The orient and Australia present very good markets for American goods at this time, Arthur Davidson said. Europe, however, is in bad shape so far as receiving goods from America is concerned, on account of the rate of exchange and the general uncertainty of the financial situation. South America, he said, was not as promising a market, at least from the motorcycle standpoint, as had been generally supposed. The motorcycle is much more popular in Europe than in America, he said, the two-wheel motor speedway, and the four-wheeled one in popularity. The two men spent most of their time while here conferring with officials of the local Harley-Davidson motorcycle agency at 200 Third street.

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PATENT CASE ENDED FAVORABLE TO REO

Important Decision Handed Down by U. S. Court.

LITIGATION SIX YEARS

Patent Laws Should Be Amended to Put Patent "Parasite" Out of Business.

NEW YORK, March 12.—A patent decision of interest to, and far-reaching effect on, the automobile industry is that just handed down by the United States circuit court of appeals, in the case of Barber versus the Otis Motor Sales company of Utica, N. Y., Reo distributor.

This litigation, which has lasted nearly six years, was over the priority rights to a valve seated in a cage, which latter was screwed into the cylinder head and was removable by swinging the push rod aside. The decision is more important to the industry in general than to the Reo Motor Car company and its dealers, for it establishes a precedent and will tend to discourage that species of patent parasite which have developed and contributed anything to the development of the industry, seeks to prey upon those who have done most in that direction.

Patent Parasite Scored.
The usual process in such cases is to apply for a patent on some device or part of a motor car, then let it stand unopposed for an indefinite period while the applicant amends his claims from time to time, taking advantage of the discoveries and progress made by others.

A typical case was the famous "Golden Patent" which was kept alive but unused for 16 years, while the actual pioneers were developing the automobile and manufacturing thousands of them. Thereupon the patentee claimed basic priority rights and collected millions of dollars in royalty on a patent which was finally proclaimed to be invalid and worthless. The Periman rim suit was another, and this one showed a great weakness of patent laws which render it possible for a plant, or even an entire industry, to be stopped by an injunction before any goods are made, the actual validity of the claims made by an irresponsible person have been handed down.

Periman's injunction not only stopped 50 per cent of the automobile industry for a time, causing tremendous loss and embarrassment, but put the Standard Welding company, the biggest rim-making concern, permanently out of business.

Amendments to Law Urged.
That the patent laws must be amended is shown by these and innumerable other cases that have plagued and hampered every branch of the industry, declare automobile manufacturers.

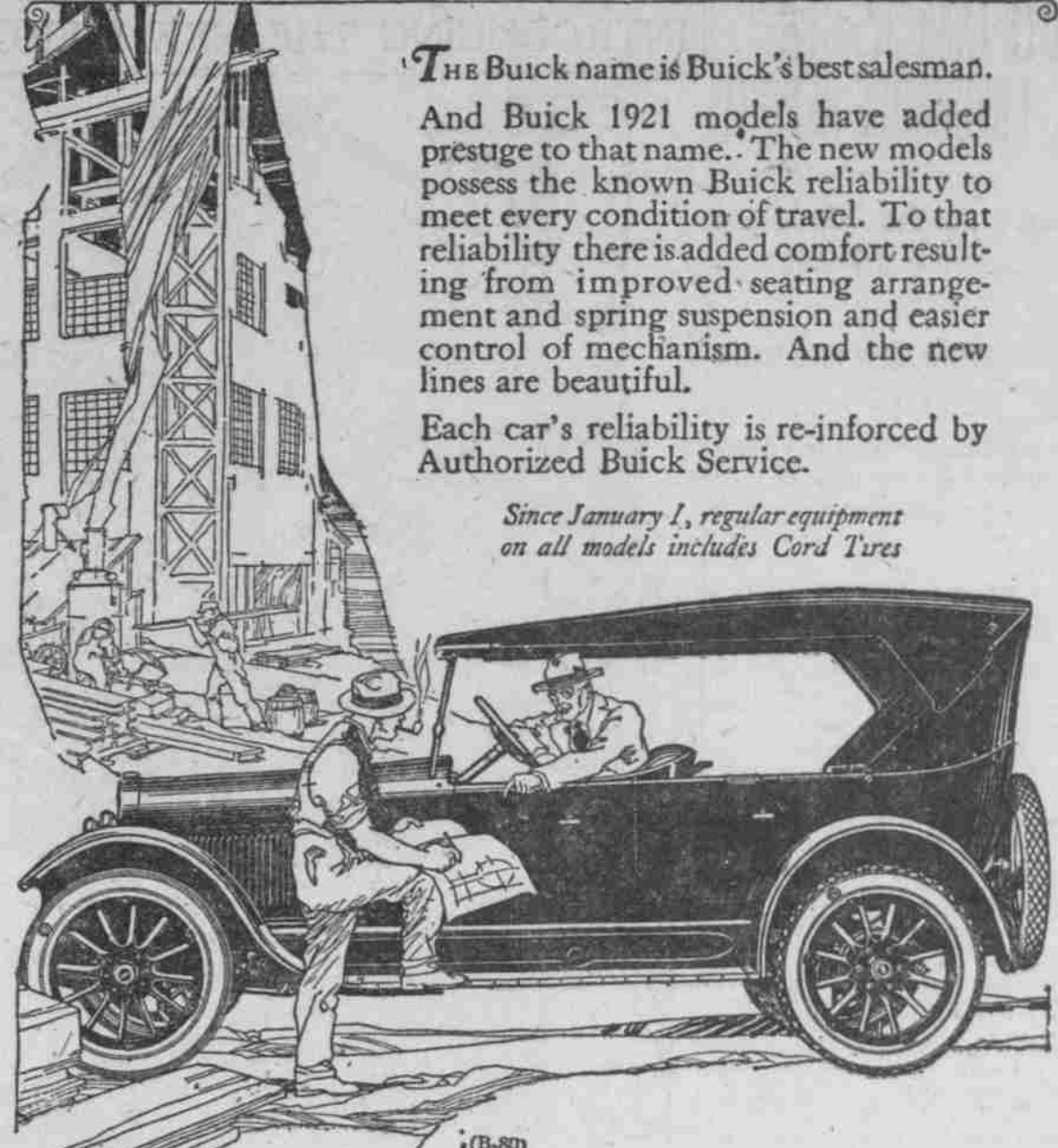
"Until such amendments have been made," says Horace T. Thomas, vice-president and chief engineer of the Reo Motor Car company, "the only course open to the honest manufacturer is to fight and keep fighting until he wins in cases of this kind. A manufacturer that costs the industry dearly and to which too many manufacturers are prone, is that of settling such claims for nominal sums in order to avoid inconvenience and litigation."

"The honest engineer finds it difficult to protect himself when, in his daily effort to develop newer and better ways of doing things, he occasionally succeeds. The most careful search of the records of the patent office must fail to show him anything that he is infringing—any prior invention—so how can he know that a claim which was palpably intended to cover something remote may be distorted to cover his own work?"

"He cannot, of course, ascertain what applications are being held up with claims amended to cover that which he has just developed, and which will be withheld until such time as thousands of his cars are in the hands of users, so that the royalties then claimed will run, as in the cases mentioned, into the millions of dollars."

"We in the automobile industry find ourselves constantly confronted by this menace, that, after adopting our latest discoveries and improvements, some one representing some pretended inventor of whom we have never heard, and who has no connection

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WHEN BETTER AUTOMOBILES ARE BUILT, BUICK WILL BUILD THEM

with the industry, will come along with a set of claims, and a demand for millions, brandishing a club labeled "injunction," and the industry is left with no choice but to settle for a comparatively nominal sum, as the case against the other manufacturer was. But as a matter of principle and in the interest of the industry in general, it was determined to fight this thing through to a finish. This victory, though deferred was complete when it did come; for not only did the higher court declare that the Reo construction did not infringe Barber's patent—but that he had no patent. Priority of invention was shown not only in one, but in several instances."

White Company Reports.
CLEVELAND, Ohio, March 12.—In issuing a report of last year's business showing an operating profit of \$3,486,704 and gross sales of \$31,983,122, Windsor T. White, president of the White Motor company, Cleveland, says: "At this time the low

point in buying of the readjustment period seems to be past and the volume and diversity of orders now being received by us indicate a general resumption of buying and a constantly improving business condition."

MARKET BETTER IN NEW YORK
Last Half of February Shows Distinct Buying Revival.

NEW YORK, March 5.—More motor cars were sold in New York during the past week than in any similar period in several months. The decided upward trend of the market is not confined to any particular car, or class of cars. The return to buying has been general and for the first time in many weeks there is a distinct demand for cars that is evidencing itself in many ways.

The largest sales increase was made in the medium price class. Three dealers in this class reported sales for the last half of February to 33 1-3 per cent above the same period in 1920. While several of the others did not approach this mark, all had experienced increased business over that of any period since the "depression" began.

But also was an appreciable increase in the demand for the higher priced cars. Most of the "quality class" dealers reported business increases that were satisfactory. In this class, as well as in the medium priced car class, there was a marked increase in the demand for open cars.

Clearing House for Mechanics.
To give increased and better service to owners of automobiles, without additional cost to the latter, the New Orleans Automobile Dealers' association has opened a clearing house for car mechanics, repair men and chauffeurs. All workmen are registered and their records for at least two years previous investigated.

Don't sue the motor cop.

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J. W. McCrea, 663 East 65th	19 1/2
W. W. Metzger, 302 Oak St.	21
Dr. D. O. Webster, 697 Lombard	22
P. E. Hansen, 621 Morgan Bldg.	20 1/2
Dr. H. A. Harr, 764 E. Madison.	19
Jas. Chikos, Main-Street Garage.	19 1/2
Dr. A. B. Bailey, 170 Vista Ave.	20
C. W. Black, 174 Thirteenth St.	20
Frank Lanning, 1297 East Taylor.	21
Dr. R. V. Moore, 1519 1/2 Williams Ave.	20
Wm. Goetten, 766 East Eleventh.	20 1/2
Fred Staver, 1184 Couch St.	20
Perry Abbott, 1004 E. Taylor.	20
Fred G. Meyer, 272 Yamhill St.	19
W. W. Bender, 231 Nartilla St.	20
L. L. Rogers, Pendleton, Or.	19

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